

MATERIAL SAFETY DATA SHEET

DPM 150

Gaseous Oxygen

April 1986



LIQUID CARBONIC

INDUSTRIAL/MEDICAL CORPORATION

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SECTION I--PRODUCT IDENTIFICATION

CHEMICAL NAME: Oxygen
COMMON NAME AND SYNONYMS: Gaseous Oxygen, GOX, Oxygen Gas
CHEMICAL FAMILY: Oxidizer FORMULA: O₂

SECTION II--HAZARDOUS INGREDIENTS

MATERIAL	VOLUME %	CAS NO.	1985-6 ACGIH TLV UNITS
Oxygen	99.5	7782-44-7	None

SECTION III--PHYSICAL DATA

BOILING POINT (°F.) No V.P. 297 SPECIFIC GRAVITY (H₂O) 1.14 @ B.P.
VAPOR PRESSURE (mmHg.) Above Critical Temp -181.4°F % VOLATILE BY VOLUME 100%
VAPOR DENSITY (AIR=1) 1.105 EVAPORATION RATE N/A
SOLUBILITY IN WATER Slightly (BUTYL ACETATE=1)
APPEARANCE AND ODOR Colorless, odorless Gas

SECTION IV--FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (METHOD USED) N/A FLAMMABLE LIMITS

LEL	UEL
	N/A

EXTINGUISHING MEDIA: Large quantities of water, carbon dioxide less effective

SPECIAL FIRE FIGHTING PROCEDURES: Remove source of Oxygen which aids combustion. Keep storage equipment cool. Fight fire according to material involved.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Strong oxidizer, vigorously reacts with hydrocarbons and organic materials. Fire exposed cylinders could rupture violently if cylinder safety devices fail to relieve pressure.

SECTION V--HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE: None specified.

EFFECTS OF OVEREXPOSURE: Breathing high concentrations (over 75% by volume) causes symptoms of hyperoxia including cramps, nausea, dizziness, hypotermia, ambylopia, respiratory difficulties, fainting, convulsions capable of leading to death.

EMERGENCY AND FIRST AID PROCEDURES: Advise physician of hyperoxia. Prompt medical attention is mandatory in cases of over exposure. Remove to area with fresh air and assist respiration.

ROUTE(S) OF ENTRY: INHALATION? Yes SKIN? Yes INGESTION?
CARCINOGENICITY: NTP? No IARC MONOGRAPHS? No OSHA? No

SECTION VI--REACTIVITY DATA

STABILITY: UNSTABLE () STABLE (X)
CONDITIONS TO AVOID: N/A
INCOMPATIBILITY (MATERIALS TO AVOID): Avoid hydrocarbons and organic materials
HAZARDOUS DECOMPOSITION PRODUCTS: None
HAZARDOUS POLYMERIZATION: MAY OCCUR () WON'T OCCUR (X)
CONDITIONS TO AVOID: N/A

SECTION VII--SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

Attempt to stop source of release. Evacuate all personnel from affected area. Use appropriate protective equipment. Remove sources of heat or ignition. Ventilate area.

WASTE DISPOSAL METHOD:

No disposal problem, gas will diffuse into atmosphere.

SECTION VIII--SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION: Not required

VENTILATION: LOCAL EXHAUST (X) Prevent O₂ concentration over 25%
MECHANICAL (GENERAL) ()

PROTECTIVE GLOVES: Cotton or leather. EYE PROTECTION: Safety glasses or goggles

OTHER PROTECTIVE EQUIPMENT: Safety shoes and safety shower; Low or high oxygen concentration alarm less than 18% or over 25% respectively, where necessary.

SECTION IX--SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:

Do not store near combustible materials or in hot locations. Protect from physical damage. Store in clean, cool, well ventilated locations. Oxygen in cylinders is a high pressure oxidizing gas, which vigorously accelerates combustion. Keep oil, grease, and hydrocarbons away. Open oxygen valves slowly.

OTHER PRECAUTIONS:

Oxygen equipment must be cleaned and degreased for oxygen service. Use only DOT and ASME coded storage containers. Refer to Bulletin SB-2, CGA pamphlet G.4.1 and P-14.

SB-2 -- "Oxygen Deficient Atmospheres"

G-4.1 -- "Cleaning Equipment for Oxygen Service"

P-14 -- "Accident Prevention Oxygen-Rich and
Oxygen-Deficient Atmospheres"

Use a check valve or trap in the oxygen cylinder discharge to prevent hazardous backflow. Cylinders must not be recharged except by or with consent of Liquid Carbonic.

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